COLORADO DISCHARGE PERMIT SYSTEM (CDPS)
FACT SHEET FOR PERMIT NUMBER CO0031984
TOWN OF CEDAREDGE WWTF
DELTA COUNTY

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I. TYPE OF PERMIT

A. Permit Type: Domestic - Minor Municipal, Lagoon System, sixth renewal

B. Discharge To: Surface Water

II. FACILITY INFORMATION

A. SIC Code: 4952 Sewerage Systems

B. Facility Classification: Class D per Section 100.5.2 of the Water and Wastewater Facility Operator Certification Requirements

C. Facility Location: Latitude: 38°52'16" N, Longitude: 107°55'26" W

D. Permitted Feature: Outfall 001, at the end of the outfall line and prior to mixing with the Alfalfa Ditch which flows to the Fruitgrowers Reservoir.

38°52'15" N, 107°55'27" W

The location(s) provided above will serve as the point(s) of compliance for this permit and are appropriate as they are located after all treatment and prior to discharge to the receiving water.

E. Facility Flows: 0.275 MGD

F. Major Changes From Last Renewal:

With its current outfall, Outfall 001, the Town of Cedaredge WWTF is now subject to the TMDL for phosphorus established for Fruitgrowers Reservoir. A compliance schedule and subsequent limitations have been included in this renewal.

Ammonia limitations were reanalyzed using the AMMTOX model in replacement of the limitations derived using the CAM model. As these limitations are more stringent than the previous limits, a compliance schedule has been included for these new limits.

III. RECEIVING STREAM

A. Waterbody Identification:

Outfall 001: *COGULG09, Fruitgrowers Reservoir*

B. Water Quality Assessment:

An assessment of the stream standards, low flow data, and ambient stream data has been performed to determine the assimilative capacities for the Alfalfa Ditch and Fruitgrowers Reservoir for potential pollutants of concern. This information, which is contained in the Water Quality Assessment (WQA) for this receiving stream(s), also includes an antidegradation review, where appropriate. The Division's Permits Section has reviewed the assimilative capacities to determine the appropriate water quality-based effluent limitations as well as potential limits based on the antidegradation evaluation, where applicable. The limitations based on the assessment and other evaluations conducted as part of this fact sheet can be found in Part I.A of the permit.

Permitted Feature 001 will be the authorized discharge points to the receiving streams.

IV. FACILITY DESCRIPTION

A. Infiltration/Inflow (I/I)

While there were issues with infiltration and inflow in this service area in the past, the facility has identified and addressed its major issues, and continues to indentify and rehabilitate the area as needed.

B. Lift Stations

There are no lift stations in the service area.

C. Chemical Usage

The permittee stated in the application that they utilize two chemicals in their treatment process. The MSDS sheets have been reviewed and the following chemicals have been approved for use and are summarized in the following table.

Table IV-1 – Chemical Additives

Chemical Name	Purpose	Constituents of Concern
Curtail Herbicide	Herbicide	Dichlorophenoxyacetic acid (2,4-D)
Chlorine	Disinfectant	Total Residual Chlorine

Chemicals deemed acceptable for use in waters that will or may be discharged to waters of the State are acceptable only when used in accordance with all state and federal regulations, and in strict accordance with the manufacturer's site-specific instructions.

The standard for dichlorophenoxyacetic acid applies only to stream segments with an active domestic water supply, and, as noted in the WQA, there are no domestic water supply users on this stream segment, and therefore no limitation will be analyzed for this parameter.

D. Treatment Facility, Facility Modifications and Capacities

The facility consists of two aerated lagoons with floating surface aerators, followed by a finishing pond, and a chlorine contact chamber with gas chlorine for disinfection. The influent and effluent flows are measured by continuous flow recorders and totalizers. Thus far, the permittee has not performed any construction at this facility that would change the hydraulic capacity of 0.275 MGD (30 day average) or the organic capacity of 600 lbs BOD_5/day for April through October and 460 lbs BOD_5/day for November through March, which were specified in Site Approval 4778. This document should be referred to for any additional information.

Pursuant to Section 100.5.2 of the Water and Wastewater Facility Operator Certification Requirements, this facility will require a Class D certified operator.

E. Sludge Treatment and Disposal

Since the treatment facility consists of aerated lagoons, sludge removal will probably be infrequent (once every 5 to 10 years) and only take place if the ponds are drained and cleaned. If sludge is removed from the lagoons for any reason, it must be disposed of in accordance with local, State and Federal regulations.

1. EPA General Permit

   EPA Region 8 issued a General Permit (effective October 19, 2007) for Colorado facilities whose operations generate, treat, and/or use/dispose of sewage sludge by means of land application, landfill, and surface disposal under the National Pollutant Discharge Elimination System. All Colorado facilities are required to apply for and to obtain coverage under the EPA General Permit.

2. Biosolids Regulation (Regulation No. 64, Colorado Water Quality Control Commission)

   While the EPA is now the issuing agency for biosolids permits, Colorado facilities that land apply biosolids must comply with requirements of Regulation No. 64, such as the submission of annual reports as discussed later in this rationale.

V. PERFORMANCE HISTORY

A. Monitoring Data

1. Discharge Monitoring Reports – The following tables summarize the effluent data reported on the Discharge Monitoring Reports (DMRs) for the previous permit term, from April 2005 through October 2012.

Table V-1a – Summary of DMR Data for Permitted Feature 001 from April through October.

Parameter	***# Samples or Reporting Periods***	***Reported Average Concentrations Avg/Min/Max***	***Reported Maximum Concentrations Avg/Min/Max***	***Previous Avg/Max Permit Limit***
Flow, influent (MGD)	54	0.17/0.14/0.21	0.2/0.15/0.26	Report/Report
Flow, effluent (MGD)	56	0.16/0.13/0.21	0.19/0.15/0.26	0.275/Report
DO (mg/l)	56	NA/NA/NA	2.8/0.34/6.8	Report Minimum
pH (su)*	56	7.1/6.3/7.9	7.4/6.8/8.2	6.5-9.0
Fecal Coliform (#/100 ml)**	56	13/1.8/130	14/1.8/317	200/400
TRC (mg/l)	50	NA/NA/NA	0.53/0.28/1	NA/NA
NH3 as N, Tot (mg/l)	56	21/2.2/39	20/2.2/39	NA/NA
NH3 as N, Tot (mg/l) Apr	8	26/19/34	26/19/34	Report/Report
NH3 as N, Tot (mg/l) May	8	25/18/39	26/18/39	Report/Report
NH3 as N, Tot (mg/l) Jun	8	22/7/34	22/7/34	Report/Report
NH3 as N, Tot (mg/l) Jul	8	20/14/27	20/14/27	Report/Report
NH3 as N, Tot (mg/l) Aug	8	17/2.2/21	17/2.2/21	Report/Report
NH3 as N, Tot (mg/l) Sep	8	16/5.6/22	16/5.6/22	Report/Report
NH3 as N, Tot (mg/l) Oct	8	18/3.4/24	18/3.4/24	Report/Report
BOD5, influent (mg/l)	54	233/0.19/356	233/0.16/402	NA/NA
BOD5, influent (lbs/day)	53	356/211/551	430/262/603	NA/NA
BOD5, effluent (mg/l)	56	17/4.5/30	18/4.5/35	30/45
BOD5 (% removal)	49	93/85/99	NA/NA/NA	85 minimum
TSS, influent (mg/l)	41	200/80/390	201/80/390	NA/NA
TSS, effluent (mg/l)	56	17/5.2/44	17/5.2/45	75/110
Oil and Grease (mg/l)	64	NA/NA/NA	0/0/0	NA/10
TDS (mg/l)				
PWS intake (mg/l)	16	77/54/90	78/59/90	NA/NA
WWTF effluent (mg/l)	16	331/12/440	333/12/440	NA/NA
Phosphorus				
30-Day Average (mg/l)	15	3.5/2.5/6	NA/NA/NA	NA/NA

**The pH data shows the minimum reported values in the "average" column, and the maximum reported values in the "maximum column*
*** Geometric mean*

Table V-1b – Summary of DMR Data for Permitted Feature 001 from November through March.

Parameter	***# Samples or Reporting Periods***	***Reported Average Concentrations Avg/Min/Max***	***Reported Maximum Concentrations Avg/Min/Max***	***Previous Avg/Max Permit Limit***
Flow, influent (MGD)	35	0.16/0.14/0.19	0.18/0.16/0.23	0.26/Report
Flow, effluent (MGD)	35	0.15/0.13/0.18	0.16/0.15/0.21	Report/Report
DO (mg/l)	35	NA/NA/NA	4.6/0.33/45	Report Minimum
pH (su)*	35	7.2/6.5/7.8	7.5/7/8.2	6.5-9.0
Fecal Coliform (#/100 ml)**	34	12/2/3500	12/2/3500	6000/12000
TRC (mg/l)	35	NA/NA/NA	0.43/0.31/0.8	NA/NA
NH3 as N, Tot (mg/l)	35	26/4.5/34	26/4.5/34	NA/NA
NH3 as N, Tot (mg/l) Jan	7	28/20/33	28/20/33	Report/36
NH3 as N, Tot (mg/l) Feb	7	27/23/30	27/23/30	Report/Report
NH3 as N, Tot (mg/l) Mar	7	26/23/32	26/23/32	Report/Report
NH3 as N, Tot (mg/l) Nov	7	22/4.5/29	22/4.5/29	Report/Report
NH3 as N, Tot (mg/l) Dec	7	24/10/34	24/10/34	Report/35
BOD5, influent (mg/l)	35	252/0.14/412	254/0.19/478	NA/NA
BOD5, influent (lbs/day)	35	380/284/584	419/317/602	NA/NA
BOD5, effluent (mg/l)	35	23/5/43	24/5/48	30/45
BOD5 (% removal)	30	92/87/98	NA/NA/NA	85 minimum
TSS, influent (mg/l)	29	204/3/341	210/3/400	NA/NA
TSS, effluent (mg/l)	35	22/10/48	22/10/65	75/110
Oil and Grease (mg/l)	43	NA/NA/NA	0/0/0	NA/10
TDS (mg/l)				
PWS intake (mg/l)	14	79/61/86	80/66/86	NA/NA
WWTF effluent (mg/l)	14	373/290/460	379/318/460	NA/NA
Phosphorus				
30-Day Average (mg/l)	14	3.7/2.2/5.2	NA/NA/NA	NA/NA

**The pH data shows the minimum reported values in the "average" column, and the maximum reported values in the "maximum column*
*** Geometric mean*

B. Compliance With Terms and Conditions of Previous Permit

1. Effluent Limitations – The data shown in the preceding table(s) indicates compliance with the numeric limitations of the previous permit with the exception of one exceedance for the average limitation for BOD, and one exceedance for the maximum BOD. A compliance advisory was issued following the BOD exceedance in 2012. An exceedance of the minimum limitation for pH occurred in 2007, and a compliance advisory was issued for this instance as well. These two instances do not indicate a reoccurring issue with meeting the limitation for this parameter.

   In accordance with 40 CFR Part 122.41(a), any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

VI. DISCUSSION OF EFFLUENT LIMITATIONS

A. Regulatory Basis for Limitations

1. Technology Based Limitations

   a. Federal Effluent Limitation Guidelines – The Federal Effluent Limitation Guidelines for domestic wastewater treatment facilities are the secondary treatment standards. These standards have been adopted into, and are applied out of, Regulation 62, the Regulations for Effluent Limitations.

   b. Regulation 62: Regulations for Effluent Limitations – These Regulations include effluent limitations that apply to all discharges of wastewater to State waters and are shown in Section VIII of the WQA. These regulations are applicable to the discharge from the Town of Cedaredge WWTF.

2. Numeric Water Quality Standards - The WQA contains the evaluation of pollutants limited by water quality standards. The mass balance equation shown in Section VI of the WQA was used for most pollutants to calculate the potential water quality based effluent limitations (WQBELs), M_2, that could be discharged without causing the water quality standard to be violated. For ammonia, the AMMTOX Model was used to determine the maximum assimilative capacity of the receiving stream. A detailed discussion of the calculations for the maximum allowable concentrations for the relevant parameters of concern is provided in Section VI of the Water Quality Assessment developed for this permitting action.

   The maximum allowable pollutant concentrations determined as part of these calculations represent the calculated effluent limits that would be protective of water quality. These are also known as the water quality-based effluent limits (WQBELs). Both acute and chronic WQBELs may be calculated based on acute and chronic standards, and these may be applied as daily maximum (acute) or 30-day average (chronic) limits.

3. Narrative Water Quality Standards - Section 31.11(1)(a)(iv) of The Basic Standards and Methodologies for Surface Waters (Regulation No. 31) includes the narrative standard that State surface waters shall be free of substances that are harmful to the beneficial uses or toxic to humans, animals, plants, or aquatic life.

   a. Whole Effluent Toxicity - The Water Quality Control Division has established the use of WET testing as a method for identifying and controlling toxic discharges from wastewater treatment facilities. WET testing is being utilized as a means to ensure that there are no discharges of pollutants "in amounts, concentrations or combinations which are harmful to the beneficial uses or toxic to humans, animals, plants, or aquatic life" as required by Section 31.11 (1) of the Basic Standards and Methodologies for Surface Waters. The requirements for WET testing are being implemented in accordance with Division policy, Implementation of the Narrative Standard for Toxicity in Discharge Permits Using Whole Effluent Toxicity (Sept 30, 2010). Note that this policy has recently been updated and the permittee should refer to this document for additional information regarding WET.

4. Water Quality Regulations, Policies, and Guidance Documents

a. Antidegradation - Since the receiving water is Undesignated, an antidegradation review is required pursuant to Section 31.8 of The Basic Standards and Methodologies for Surface Water. As set forth in Section VII of the WQA, an antidegradation evaluation was conducted for pollutants when water quality impacts occurred and when the impacts were significant. Based on the antidegradation requirements and the reasonable potential analysis discussed below, antidegradation-based average concentrations (ADBACs) may be applied.

According to Division procedures, the facility has three options related to antidegradation-based effluent limits: (1) the facility may accept ADBACs as permit limits (see Section VII of the WQA); (2) the facility may select permit limits based on their non-impact limit (NIL), which would result in the facility not being subject to an antidegradation review and thus the antidegradation-based average concentrations would not apply (the NILs are also contained in Section VII of the WQA); or (3) the facility may complete an alternatives analysis as set forth in Section 31.8(3)(d) of the regulations which would result in alternative antidegradation-based effluent limitations.

The effluent must not cause or contribute to an exceedance of a water quality standard and therefore the WQBEL must be selected if it is lower than the NIL. Where the WQBEL is not the most restrictive, the discharger may choose between the NIL or the ADBAC: the NIL results in no increased water quality impact; the ADBAC results in an "insignificant" increase in water quality impact. The ADBAC limits are imposed as two-year average limits.

b. Antibacksliding – As the Fruitgrowers Reservoir is designated Use-Protected, the antibacksliding requirements in Regulation 61.10 have been met for Outfall 001.

c. Determination of Total Maximum Daily Loads (TMDLs) – This rationale and the accompanying permit include TMDLs developed as specified in "Total Maximum Daily Load Assessment, Fruitgrowers Reservoir, COGULG09, Dissolved Oxygen" and the corresponding waste load allocations (WLAs) for phosphorus. As required under the Clean Water Act Section 303(d), these TMDLs have been submitted, through the normal public notification process, to EPA Region VIII for their review and approval, and were approved on February 2, 2013. Therefore, in compliance with the TMDL, a limitation for dissolved oxygen has been established.

d. Colorado Mixing Zone Regulations – Pursuant to section 31.10 of The Basic Standards and Methodologies for Surface Water, a mixing zone determination is required for this permitting action. The Colorado Mixing Zone Implementation Guidance, dated April 2002, identifies the process for determining the meaningful limit on the area impacted by a discharge to surface water where standards may be exceeded (i.e., regulatory mixing zone). This guidance document provides for certain exclusions from further analysis under the regulation, based on site-specific conditions.

The guidance document provides a mandatory, stepwise decision-making process for determining if the permit limits will not be affected by this regulation. Exclusion, based on Extreme Mixing Ratios, may be granted if the ratio of the facility design flow to the chronic low flow (30E3) is greater than 2:1 or if the ratio of the chronic low flow to the design flow is greater than 20:1. Since the low flows applicable at the outfall is zero, no mixing zone study is required.

e. Salinity Regulations – In compliance with the Colorado River Salinity Standards and the Colorado Discharge Permit System Regulations, the permittee shall monitor for total dissolved solids on a **Quarterly** basis. Samples shall be taken at Permitted Features 001 and 002.

An evaluation of the discharge of total dissolved solids indicates that the Town of Cedaredge facility does not exceed the threshold of 1 ton/day or 350 tons/year of salinity. To determine the TDS loading from this facility, the average reported TDS values were multiplied by the average flow, then by 8.34. The average was determined to be 0.22 tons/day.

f. Reasonable Potential Analysis – Using the assimilative capacities contained in the WQA, an analysis must be performed to determine whether to include the calculated assimilative capacities as WQBELs in the permit. This reasonable potential (RP) analysis is based on the Determination of the Requirement to Include Water Quality Standards-Based Limits in CDPS Permits Based on Reasonable Potential, dated December, 2002. This guidance document utilizes both quantitative and qualitative approaches to establish RP depending on the amount of available data.

A qualitative determination of RP may be made where ancillary and/or additional treatment technologies are employed to reduce the concentrations of certain pollutants. Because it may be anticipated that the limits for a parameter could not be met without treatment, and the treatment is not coincidental to the movement of water through the facility, limits may be included to assure that treatment is maintained.

A qualitative RP determination may also be made where a federal ELG exists for a parameter, and where the results of a quantitative analysis results in no RP. As the federal ELG is typically less stringent than a limitation based on the WQBELs, if the discharge was to contain concentrations at the ELG (above the WQBEL), the discharge may cause or contribute to an exceedance of a water quality standard.

To conduct a quantitative RP analysis, a minimum of 10 effluent data points from the previous 5 years, should be used. The equations set out in the guidance for normal and lognormal distribution, where applicable, are used to calculate the maximum estimated pollutant concentration (MEPC). For data sets with non-detect values, and where at least 30% of the data set was greater than the detection level, MDLWIN software is used consistent with Division guidance to generate the mean and standard deviation, which are then used to establish the multipliers used to calculate the MEPC. If the MDLWIN program cannot be used the Division's guidance prescribes the use of best professional judgment.

For some parameters, recent effluent data or an appropriate number of data points may not be available, or collected data may be in the wrong form (dissolved vs total) and therefore may not be available for use in conducting an RP analysis. Thus, consistent with Division procedures, monitoring will be required to collect samples to support a RP analysis and subsequent decisions for a numeric limit. A compliance schedule may be added to the permit to require the request of an RP analysis once the appropriate data have been collected.

For other parameters, effluent data may be available to conduct a quantitative analysis, and therefore an RP analysis will be conducted to determine if there is RP for the effluent discharge to cause or contribute to exceedances of ambient water quality standards. The guidance specifies that if the MEPC exceeds the maximum allowable pollutant concentration (MAPC), limits must be established and where the MEPC is greater than half the MAPC (but less than the MAPC),

monitoring must be established. Table VI-1 contains the calculated MEPC compared to the corresponding MAPC, and the results of the reasonable potential evaluation, for those parameters that met the data requirements. The RP determination is discussed for each parameter in the text below.

Table VI-1a – Reasonable Potential (R.P.) Analysis for Outfall 001 from April through October

Parameter	30-Day Average			7-Day Ave or Daily Max		
	MEPC	WQBEL (MAPC)	R.P.	MEPC	WQBEL (MAPC)	R.P.
Temp (°C)	NA	Monitor	No (Qual)	NA	Monitor	No (Qual)
E. coli (#/100 ml)	NA	205	Yes (Qual)	NA	410	Yes (Qual)
TRC (mg/l)	NA	0.011	Monitor (Qual)	1.1	0.019	Monitor (Qual)
NH3 as N, Tot (mg/l) Apr	34	22	Yes	34	43	Yes
NH3 as N, Tot (mg/l) May	39	29	Yes	39	57	Yes
NH3 as N, Tot (mg/l) Jun	34	4.6	Yes	34	17	Yes
NH3 as N, Tot (mg/l) Jul	27	3.9	Yes	27	17	Yes
NH3 as N, Tot (mg/l) Aug	21	4.1	Yes	21	19	Yes
NH3 as N, Tot (mg/l) Sep	22	4.0	Yes	22	17	Yes
NH3 as N, Tot (mg/l) Oct	24	4.5	Yes	24	17	Yes

Table VI-1b – Reasonable Potential (R.P.) Analysis for Outfall 001 from November through March

Parameter	30-Day Average			7-Day Ave or Daily Max		
	MEPC	WQBEL (MAPC)	R.P.	MEPC	WQBEL (MAPC)	R.P.
Temp (°C)	NA	Monitor	No (Qual)	NA	Monitor	No (Qual)
E. coli (#/100 ml)	NA	717	Yes (Qual)	NA	1434	Yes (Qual)
TRC (mg/l)	NA	0.072	No (Qual)	0.84	0.12	No (Qual)
NH3 as N, Tot (mg/l) Jan	33	11	Yes	33	21	Yes
NH3 as N, Tot (mg/l) Feb	30	12	Yes	30	22	Yes
NH3 as N, Tot (mg/l) Mar	32	14	Yes	32	27	Yes
NH3 as N, Tot (mg/l) Nov	29	14	Yes	29	26	Yes
NH3 as N, Tot (mg/l) Dec	34	13	Yes	34	25	Yes

B. Parameter Evaluation

BOD_5 – The BOD_5 concentrations in Reg 62 are the most stringent effluent limits and are therefore applied. The removal percentages for BOD_5 also apply based on the Regulations for Effluent Limitations. These limitations are the same as those contained in the previous permit and are imposed upon the effective date of this permit.

Total Suspended Solids – The TSS concentrations in Reg 62 are the most stringent effluent limits and are therefore applied. When the facility begins using the mechanical plant, the removal percentages for TSS will also apply based on the Regulations for Effluent Limitations, and the limitations for total suspended solids will change. Currently, these limitations are the same as those contained in the previous permit and are imposed upon the effective date of this permit.

Oil and Grease – The oil and grease limitations from the Regulations for Effluent Limitations are applied as they are the most stringent limitations. This limitation is the same as those contained in the previous permit and is imposed upon the effective date of this permit.

pH – This parameter is limited by the water quality standards of 6.5-9.0 s.u., as this range is more stringent than other applicable standards. For Outfall 001, these limits are imposed at the point of discharge of the Cedaredge WWTF, despite water quality standards applying 1.5 miles downstream at Fruitgrowers Reservoir. Studies completed by the Cedaredge WWTF and summarized as part of their *Ammonia Study Annual Report* indicate that there are instances where there is no pH drift in Alfalfa ditch between locations upstream of the Cedaredge WWTF point of discharge and 1.1 miles downstream, which is the farthest sampling location downstream in the Alfalfa Ditch prior to Fruitgrowers Reservoir that was reflected in the study. Data from the study cover a period of record from June 1998 through April 2000. To ensure that the water quality standards are met at Fruitgrowers Reservoir and because there are instances in which there are no changes between upstream pH and downstream pH, the in-stream standards are applied at the point of discharge from the Cedaredge WWTF. These limitations are the same as those contained in the previous permit and are imposed upon the effective date of this permit.

E. Coli – The limitations for E. Coli are based upon the WQBELs as described in the WQA. A qualitative determination of RP has been made as the treatment facility has been designed to treat specifically for this parameter. Though one exceedance of the proposed limitations occurred in January of 2012, this instance appears to be an outlier. Therefore, previous monitoring as shown in Table V-1 indicates that these limitations can be met and are therefore imposed upon the effective date of the permit.

Total Residual Chlorine (TRC) –The limitations for TRC are based upon the WQBELs as described in the WQA. A qualitative determination of RP has been made as chlorine may be used in the treatment process. A study conducted by the Cedaredge WWTF to determine chlorine dissipation indicates that at points 0.1 miles below the facility, total residual chlorine in-stream concentrations are rarely found. Specifically, an almost two-year long study involving weekly in-stream sampling reveals only four times when chlorine was detected in Alfalfa ditch at the location 0.1 miles downstream. The study further indicates that at the location 1.1 miles downstream of the facility, no chlorine was detected. Based on this study, total residual chlorine was found to dissipate to non-detectable levels prior to Fruitgrowers Reservoir. Thus, it has been concluded that total residual chlorine limits based on water quality standards are not necessitated at Outfall 001, and since the 0.5 mg/l technology based limitation is not applicable to ditches, monitoring only will be required for this parameter.

Ammonia – The limitations for ammonia are based upon the WQBELs as described in the WQA. A qualitative determination of RP has been made as the treatment facility has been designed to treat specifically for this parameter. These limitations are more stringent than the previous limits, and, the permittee may not be able to consistently meet these limitations; therefore, a compliance schedule has been added to the permit to give the permittee time to meet these limitations.

Temperature – As there are no temperature standards that apply to the Alfalfa Ditch, and temperature is assumed to regulate to background levels between the outfall and the confluence with Fruitgrowers Reservoir, no temperature monitoring will apply to this facility.

Phosphorus – The TMDL approved in February of 2012 states that the Town of Cedaredge WWTF must maintain a phosphorus load of 18 kg per year at Outfall 001. This is a new limitation at Outfall 001, and it is unknown if the permittee can meet the limit; therefore a compliance schedule has been added for Outfall 001 to the permit to give the permittee time to meet this annual load phosphorus limitation.

Dissolved Oxygen – While the previous permit required monitoring for dissolved oxygen at Outfall 001, this permit will not require monitoring of dissolved oxygen, as the TMDL for oxygen is being addressed via the limitation for phosphorus listed above.

Organics – The effluent is not expected or known to contain organic chemicals, and therefore, limitations for organic chemicals are not needed in this permit.

VII. ADDITIONAL TERMS AND CONDITIONS

A. Monitoring

Effluent Monitoring – Effluent monitoring will be required as shown in the permit document. Refer to the permit for locations of monitoring points. Monitoring requirements have been established in accordance with the frequencies and sample types set forth in the Baseline Monitoring Frequency, Sample Type, and Reduced Monitoring Frequency Policy for Industrial and Domestic Wastewater Treatment Facilities. This policy includes the methods for reduced monitoring frequencies based upon facility compliance as well as for considerations given in exchange for instream monitoring programs initiated by the permittee. Table VII-1a shows the results of the reduced monitoring frequency analysis for Permitted Feature 001 for April through October for the Town of Cedaredge, based upon compliance with the previous permit. Table VII-1b shows results for Outfall 001 for November through March.

In accordance with the Division's practice regarding *E. coli*, the proposed permit limit for fecal coliform is based on the dividing the limitation for *E. coli* by 0.32.

Table VII-1a – Monitoring Reduction Evaluation for Outfall 001 for April-October

Parameter	*Proposed Permit Limit*	*Average of 30-Day (or Daily Max) Average Conc.*	*Standard Deviation*	*Long Term Characterization (LTC)*	*Reduction Potential*
pH (su) Minimum	min 6.5	7	0.25	6.5	1 Step
pH (su) Maximum	max 9.0	7.3	0.25	7.8	
Fecal Coliform (#/100 ml)	641	12	11	34	3 Levels
NH3 as N, Tot (mg/l)	3.9	22	3.7	29.4	None
BOD5, effluent (mg/l)	30	18	7.2	32.4	None
TSS, effluent (mg/l)	30	17	4.6	26.2	1 Level
Oil and Grease (mg/l)	10	0	0	0	3 Levels

Table VII-1b – Monitoring Reduction Evaluation for Outfall 001 for November-March

Parameter	*Proposed Permit Limit*	*Average of 30-Day (or Daily Max) Average Conc.*	*Standard Deviation*	*Long Term Characterization (LTC)*	*Reduction Potential*
pH (su) Minimum	min 6.5	7.2	0.26	6.68	1 Step
pH (su) Maximum	max 9.0	7.5	0.26	8.02	
Fecal Coliform (#/100 ml)	2241	11	13	37	3 Levels
NH3 as N, Tot (mg/l)	11	26	3.6	33.2	None
BOD5, effluent (mg/l)	30	25	6.1	37.2	None
TSS, effluent (mg/l)	30	19	3.5	26	1 Level
Oil and Grease (mg/l)	10	0	0	0	3 Levels

As shown above, pH and TSS are both subject to one level of monitoring frequency reduction, while E. coli, which was analyzed using fecal coliform data, as well as oil and grease are subject to a three level reduction. TRC, ammonia, and BOD_5 are not subject to any monitoring frequency reductions.

B. Reporting

1. Discharge Monitoring Report – The Town of Cedaredge facility must submit Discharge Monitoring Reports (DMRs) on a monthly basis to the Division. These reports should contain the required summarization of the test results for all parameters and monitoring frequencies shown in Part I.A.2 of the permit. See the permit, Part I.D for details on such submission.

2. Special Reports – Special reports are required in the event of an upset, bypass, or other noncompliance. Please refer to Part II.A. of the permit for reporting requirements. As above, submittal of these reports to the US Environmental Protection Agency Region VIII is no longer required.

C. Signatory and Certification Requirements

Signatory and certification requirements for reports and submittals are discussed in Part I.D.8. of the permit.

D. Compliance Schedules

The following compliance schedules are included in the permit. See Part I.B of the permit for more information.

a. A compliance schedule is included to give the facility time to install any necessary construction or additional treatment to meet newly established phosphorus limitations, as well as more stringent ammonia limitations. A timeframe of five years has been established to meet these requirements. If the limitations can be met with the current treatment process, no construction is required.

All information and written reports required by the following compliance schedules should be directed to the Permits Section for final review unless otherwise stated.

E. Economic Reasonableness Evaluation

Section 25-8-503(8) of the revised (June 1985) Colorado Water Quality Control Act required the Division to "determine whether or not any or all of the water quality standard based effluent limitations are reasonably related to the economic, environmental, public health and energy impacts to the public and affected persons, and are in furtherance of the policies set forth in sections 25-8-192 and 25-8-104."

The Colorado Discharge Permit System Regulations, Regulation No. 61, further define this requirement under 61.11 and state: "Where economic, environmental, public health and energy impacts to the public and affected persons have been considered in the classifications and standards setting process, permits written to meet the standards may be presumed to have taken into consideration economic factors unless:

a. A new permit is issued where the discharge was not in existence at the time of the classification and standards rulemaking, or

b. In the case of a continuing discharge, additional information or factors have emerged that were not anticipated or considered at the time of the classification and standards rulemaking."

The evaluation for this permit shows that the Water Quality Control Commission, during their proceedings to adopt the Classifications and Numeric Standards for Gunnison and Lower Dolores River Basins, considered economic reasonableness.

Furthermore, this is not a new discharger and no new information has been presented regarding the classifications and standards. Therefore, the water quality standard-based effluent limitations of this permit are determined to be reasonably related to the economic, environmental, public health and energy impacts to the public and affected persons and are in furtherance of the policies set forth in Sections 25-8-102 and 104. If the permittee disagrees with this finding, pursuant to 61.11(b)(ii) of the Colorado Discharge Permit System Regulations, the permittee should submit all pertinent information to the Division during the public notice period.

VIII. REFERENCES

A. Colorado Department of Public Health and Environment, Water Quality Control Division Files, for Permit Number CO0031984.

B. "Design Criteria Considered in the Review of Wastewater Treatment Facilities", Policy 96-1, Colorado Department of Public Health and Environment, Water Quality Control Commission, April 2007.

C. Basic Standards and Methodologies for Surface Water, Regulation No. 31, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective January 31, 2013.

D. Classifications and Numeric Standards for Gunnison and Lower Dolores River Basins, Regulation No. 35, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective June 30, 2013.

E. Colorado Discharge Permit System Regulations, Regulation No. 61, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective January 30, 2012.

F. Regulations for Effluent Limitations, Regulation No. 62, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective July 30, 2012.

G. Pretreatment Regulations, Regulation No. 63, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective April 01, 2007.

H. Biosolids Regulation, Regulation No. 64, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective March 30, 2010.

I. Colorado River Salinity Standards, Regulation No. 39, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective August 30, 1997.

J. Section 303(d) List of Water Quality Limited Segments Requiring TMDLs, Regulation No 93, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective March 30, 2012.

K. Colorado's Section 303(d) List of Impaired Waters and Monitoring and Evaluation List, Regulation No 93, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective March 30, 2012.

L. Antidegradation Significance Determination for New or Increased Water Quality Impacts, Procedural Guidance, Colorado Department of Public Health and Environment, Water Quality Control Division, effective December 2001.

M. Memorandum Re: First Update to (Antidegradation) Guidance Version 1.0, Colorado Department of Public Health and Environment, Water Quality Control Division, effective April 23, 2002.

N. Determination of the Requirement to Include Water Quality Standards-Based Limits in CDPS Permits Based on Reasonable Potential, Colorado Department of Public Health and Environment, Water Quality Control Division, effective December2002.

O. The Colorado Mixing Zone Implementation Guidance, Colorado Department of Public Health and Environment, Water Quality Control Division, effective April 2002.

P. Baseline Monitoring Frequency, Sample Type, and Reduced Monitoring Frequency Policy for Domestic and Industrial Wastewater Treatment Facilities, Water Quality Control Division Policy WQP-20, May 1, 2007.

Q. Implementing Narrative Standards in Discharge Permits for the Protection of Irrigated Crops, Water Quality Control Division Policy WQP-24, March 10, 2008.

R. Implementing Narrative Standard for Toxicity in Discharge Permits Using Whole Effluent Toxicity (WET) Testing. Colorado Department of Public Health and Environment, Water Quality Control Division Policy Permits-1, September 30, 2010.

S. Policy for Conducting Assessments for Implementation of Temperature Standards in Discharge Permits, Colorado Department of Public Health and Environment, Water Quality Control Division, Policy Number WQP-23, effective July 3, 2008.

T. Policy for Permit Compliance Schedules, Colorado Department Public Health and Environment, Water Quality Control Division Policy Number WQP-30, effective December 2, 2010.

U. Procedural Regulations for Site Applications for Domestic Wastewater Treatment Works, Regulation No. 22, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective September 30, 2009.

V. Regulation Controlling discharges to Storm Sewers, Regulation No. 65, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective May 30, 2008.

W. Water and Wastewater Facility Operator Certification Requirements, Regulation No. 100, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective September 30, 2007.

IX. PUBLIC NOTICE COMMENTS

Comments from the Town of Cedaredge, (hereafter referred to as 'Cedaredge') were received during the public notice period. Copies of these comments will be made available upon request. Topical summaries of the comments and the response of the Division are provided below.

1. *Cedaredge would like to correct the longitude of outfall 001 as listed currently in the application. Currently, the longitude is listed as 107°55'25" W, but is more accurately described as 107°55'27" W.*

   The Division has revised the longitude per the clarification from Cedaredge in the above comment. The longitude has been adjusted in the final permit from 107°55'25" W to 107°55'27" W in part II.C of the Fact Sheet and part I.A.1 of the Permit.

2. *Cedaredge notes that Table V-1a of the Fact Sheet should have "Flow, influent (MGD)" in the first row first column, as it is in Table V-1b. Consequently, "Flow, effluent (MGD)" should be in the second row of Table V-1a.*

The Division notes that this is a typo in the Fact Sheet. Therefore, in Table V-1a of the Fact, the first row first column has been corrected from "Flow, effluent (MGD)" to "Flow, influent (MGD)", while the second row first column has been corrected from "Flow, influent (MGD)" to "Flow, effluent (MGD)." The Division notes that all data were in the correct rows, and that only the first column and the final column describing limitations (also a typo that was corrected) were incorrectly labeled. These changes were made in part V.A.1 of the Fact Sheet.

3. *Cedaredge believes that the spills referenced in the summer of 2008 in Part B of the Fact Sheet are incorrect, as CDPHE has been unable to provide evidence of the compliance advisory, and the facility does not recall or have records of a compliance advisory.*

   The Division recognizes that this was an error. The description of spills and subsequent compliance advisories were inadvertently included from another facility. The Division acknowledges that there is no record of spills and an associated compliance advisory for this facility. This language has been removed from Part V.B.2 of the Fact Sheet.

4. *Cedaredge requests an additional two year extension to the Compliance Schedule, giving the facility six and one half years total. This would allow the facility more time to utilize the recently implemented $6/month plant improvement fee to minimize the amount of loan needed to comply with the new permit requirements.*

   The Division will extend the compliance schedule for total phosphorus and total ammonia to a total of five years, which is the length of the permit, allowing the facility more time to gather resources to attain compliance with the final limitations for these parameters. This change has been made in Part VII.D.a of the Fact Sheet and Part I.B.5.a of the Permit.

5. *Cedaredge requests that the composite samples required for effluent monitoring be changed to grab samples, as this is sufficient for a lagoon system.*

   The Division acknowledges that grab sampling is an appropriate sampling type for characterizing the effluent concentrations in a lagoon system as discussed in Water Quality Control Division Policy, WQP-20, Baseline Monitoring Frequency, Sample Type, and Reduced Monitoring Frequency Policy for Domestic and Industrial Wastewater Treatment Facilities. The sample type has been changed from 'composite' to 'grab' in the table labeled "Permitted Feature Outfall 001" in Part I.A.2 of the permit.

Alexander Stafford
6/24/2013